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25. (NEW) The component for the rocket engine of claim 23, further comprising:
about 60 to about 75 weight percent nickel;
about 12 to about 17 weight percent cobalt;
about 4 to about 16 weight percent chromium;
about 1 to about 4 weight percent aluminum; and
about 1 to about 4 weight percent titanium.

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REMARKS

Claims 1-25 are now pending in the application. Minor amendments have been made to the claims to simply overcome the objections to the claims under 35 U.S.C. § 112. The Examiner is respectfully requested to reconsider and withdraw the rejection(s) in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 112

Claims 18-22 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. Claims 18-22 were held indefinite because the Examiner asserted that an alloy without proportions for its alloying elements is indefinite. This rejection is respectfully traversed.

Independent claim 18 relates to a "nickel-based metal alloy" and recites "at least 50 weight percent nickel" and "less than 12 weight percent chromium". Therefore, independent claim 18 includes recitation of particular alloy percentages for

the alloy. *Koebel v. Coe*, cited by the Examiner, relates to a claim which only lists several elements which may be proportioned to form an alloy that has a claimed function. Contrary to this, independent claim 18 includes specific alloying proportions. Therefore, the Applicant believes that independent claim 18 is in a condition for allowance and claims 19-22, dependent thereon, are also in a condition for allowance.

REJECTION UNDER 35 U.S.C. § 102 AND § 103

Claims 1-17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Miller et al.* (U.S. Patent No. 5,120,373). This rejection is respectfully traversed. Independent claim 1 recites a burn resistant and high tensile strength alloy comprising "at most about 12 weight percent chromium". In addition, independent claim 11 recites a nickel alloy comprising "at least about 72 weight percent nickel." Furthermore, independent claim 18 recites a nickel-based metal alloy comprising "less than about 12 weight percent chromium." *Miller et al.* teaches only an alloy including between 12 and 20 weight percent chromium. See Table 1, Column 2. Furthermore, *Miller et al.* teaches an alloy including at most 71.78 weight percent nickel. See *Id.* Therefore, *Miller et al.* does not teach or disclose the claimed alloys as recited in each of the independent claims.

Moreover, *Miller et al.* teaches away from the presently claimed invention. Specifically, with reference to Table 1 of the *Miller et al.* description, the preferred ranges of chromium are taught to be between 13 and 18 weight percent. The preferred ranges of nickel are between 52.92 and 68.675 weight percent. Therefore, *Miller et al.* teaches preferred ranges that are even more removed from the recitation of the present

claims, than the broadest disclosed ranges. Therefore, Miller et al. actually **teaches away** from the presently claimed invention.

Moreover, Miller et al. does not teach or disclose a rocket engine that includes a metal alloy including nickel and chromium that has the claimed pressure thresholds or tensile strengths. Nor does Miller et al. suggest that a rocket engine including the claimed tensile strengths or pressure thresholds could be formed.

Therefore, the Applicant believes that independent claims 1, 11, 18, and 23 are all in a condition for allowance; furthermore, the Applicant believes that each of the dependent claims depending from the independent claims are also in a condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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ATTACHMENT FOR CLAIM AMENDMENTS

The following is a marked up version of each amended claim in which underlines indicates insertions and brackets indicate deletions.

1. (AMENDED) A burn [resistance]resistant and high tensile strength alloy, comprising:

about 55 to about 75 weight percent nickel;

about 12 to about 17 weight percent cobalt;

[about 4 to about 16]at most about 12 weight percent chromium;

about 1 to about 4 weight percent aluminum; and

about 1 to about 4 weight percent titanium.

4. (AMENDED) The alloy of claim 1, wherein the chromium content is about [6]1 to about [15] 11.5 weight percent.

7. (AMENDED) The alloy of claim 1, further comprising [silicone]silicon.

11. (AMENDED) A nickel[-based] alloy, comprising:

[about 70 to about 75]at least about 72 weight percent nickel;

about 13.5 to about 16.5 weight percent cobalt;

about 6 to about 15 weight percent chromium;

about 1 to about 4 weight percent aluminum; and

about 1 to about 4 weight percent titanium.

14. (AMENDED) The nickel-based alloy of claim 11, further comprising

[silicone]silicon.

18. (AMENDED) A nickel-based metal alloy comprising:

at least 50 weight percent nickel;

less than about 12 weight percent chromium;

a threshold pressure at least about 4,000 pounds per square inch; and

a tensile strength at least about 160,000 pounds per square inch.

20. (AMENDED) The nickel-based metal alloy of claim 19, further comprising:

manganese, carbon, boron, zirconium, [and silicone]or silicon.